REMARKS/ARGUMENTS

Reconsideration and allowance of the subject application are respectfully requested.

Figures 1 and 2 have been corrected to include "Prior Art" labels. Figure 2 also includes labels to indicate the contents or function of each block. A replacement sheet with these figures has been submitted for approval.

The Examiner requires that the Abstract be amended. An amended abstract has been submitted with this response.

Claims 14-26 stand rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite. The antecedent basis objections noted in claims 14, 18, 20, 21, and 23 have been overcome by amendment. Withdrawal of the indefiniteness rejection is requested.

Claims 14-17, 19 and 21-26 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,675,393 to Chida described in the background of the instant application. This rejection is respectfully traversed.

Claim 14 now incorporates the subject matter of original claim 17, now canceled, and certain subject matter of claim 21. Claim 23 incorporates similar features. A new set of apparatus claims 27-29 has been added. The new claims are similar to claims 23-25, but do not use means-plus-function terminology.

A single prior art reference only anticipates a claim if expressly or inherently describes each and every limitation set forth in the claim. *Verdegaal Bros., Inc. v. Union Oil Co., Inc.*, 814 F.2d 628, 631 (Fed. Cir. 1987). Chida fails to disclose every feature of the independent claims.

Chida describes an image processing apparatus suitable for the H.261 video coding standard which employs independent, same-size segments in different formats need no recalculation of motion vector differences. Chida fails to disclose at least two claim features:

(1) independent segments that have a flexible structure, and (2) recalculating any motion vector differences between the first and second format.

It is not possible to form a composed video image in the compressed domain coded according to the H.263 and MPEG standards having flexibly structure independent segments using the image processing disclosed in Chida. With H.261 coded images, as opposed to H.263 coded images, a Common Intermediate Format (CIF) image can be composed by mixing up to four Quarter CIF (QCIF) images without replacing or inserting segment headers or recalculating the motion vectors. A QCIF image includes three Groups Of Blocks (GOBs), i.e., independent segments. A CIF image includes 12 GOBs. The QCIF GOBs have the same size as the CIF GOBs, i.e., 11x3 macroblocks. Consequently, up to 4 QCIF images can be mixed in the bit stream domain to form a CIF image by simply interleaving GOBs from the different CIF images. Each of the 12 GOBs of the composed CIF image corresponds to one of the GOBs of the four mixed original QCIF images, each of which includes 3 GOBs There is no image degradation, and the decoded composed image will be identical to a composition of 4, individually-decoded images.

The H.263 standard is different than the H.261 standard. In H.263, the GOBs (the independent segments) have a flexible structure where the size of the GOBs differs in different formats, and each GOB has a width equal to the width of the picture—both in CIF images and in QCIF images. The size of a QCIF GOB is 11x1 macroblocks, and the size of a CIF GOB is 22x1 macroblocks. As a result, one CIF GOB in a composed image includes 2 QCIF GOBs, thereby placing the macroblocks in a different surrounding in the composed CIF message, as compared to in the CIF image. This requires recalculation of the Motion Vector (MV) differences.

This MV difference recalculation required for H.263 and MPEG presents problems not solved by Chida—the forming of a composed CIF image from QCIF images where the image segments have a flexible structure. In contrast, the independent claims provide a solution to these problems by inserting segment headers at the intersection between the first row and the second row of each original (e.g., QCIF) image in the composed (e.g., CIF) image and by recalculating the motion vector differences between the first (e.g., CIF) and second (e.g., QCIF) formats.

The application is now in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____
John R. Lastova
Reg. No. 33,149

JRL:at
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100